

WHAT IS CLAIMED IS:

- 1           1.     A method for using storage slots, comprising:  
2                 receiving a move command to move a portable data storage medium from a source  
3                 address to a destination address;  
4                 locating an empty storage slot that has no association with the destination address;  
5                 moving the portable data storage medium from the source address to the located  
6                 empty storage slot; and  
7                 storing an association between the located empty storage slot and the destination  
8                 address.
- 1           2.     The method of claim 1, wherein locating locates a closest empty storage  
2                 slot.
- 1           3.     The method of claim 1, wherein storing the association further comprises:  
2                 updating one or more tables.
- 1           4.     The method of claim 1, further comprising:  
2                 assigning a storage element count to each one of multiple logical libraries, wherein  
3                 the sum of the storage element count for each one of the multiple logical libraries exceeds  
4                 the total number of storage slots in the library.
- 1           5.     The method of claim 4, wherein the storage element count for one or more  
2                 of the multiple logical libraries is equal to a total number of storage slots in a library.
- 1           6.     The method of claim 4, further comprising:  
2                 allowing one or more of the multiple logical libraries to be associated with any  
3                 storage slot in a library.

- 1           7.     The method of claim 1, further comprising:
  - 2           assigning a storage slot count greater than a total number of storage slots in a
  - 3     library to one or more logical libraries;
  - 4           adding new storage slots to the library; and
  - 5           allowing one or more of the logical libraries to be associated with the newly added
  - 6     storage slots.
- 1           8.     The method of claim 7, wherein the storage slot count equals a maximum
- 2     number of storage slots that may subsequently be in the library.
- 1           9.     The method of claim 7, further comprising:
  - 2           adding a new frame to the library that includes the new storage slots.
- 1           10.    The method of claim 7, wherein the new storage slots comprise storage
- 2     slots whose status is changed from a status of not being eligible to be associated with one
- 3     or more of the logical libraries to being eligible to be associated with one or more of the
- 4     logical libraries.
- 1           11.    An article of manufacture for using storage slots, wherein the article of
- 2     manufacture is capable of causing operations to be performed, the operations comprising:
  - 3           receiving a move command to move a portable data storage medium from a source
  - 4     address to a destination address;
  - 5           locating an empty storage slot that has no association with the destination address;
  - 6           moving the portable data storage medium from the source address to the located
  - 7     empty storage slot; and
  - 8           storing an association between the located empty storage slot and the destination
  - 9     address.

1           12.    The article of manufacture of claim 11, wherein operations for locating  
2 further comprise operations for locating a closest empty storage slot.

1           13.    The article of manufacture of claim 11, wherein the operations for storing  
2 the association further comprise:  
3           updating one or more tables.

1           14.    The article of manufacture of claim 11, wherein the operations further  
2 comprise:  
3           assigning a storage element count to each one of multiple logical libraries, wherein  
4 the sum of the storage element count for each one of the multiple logical libraries exceeds  
5 the total number of storage slots in the library.

1           15.    The article of manufacture of claim 14, wherein the storage element count  
2 for one or more of the multiple logical libraries is equal to a total number of storage slots  
3 in a library.

1           16.    The article of manufacture of claim 14, wherein the operations further  
2 comprise:  
3           allowing one or more of the multiple logical libraries to be associated with any  
4 storage slot in a library.

1           17.    The article of manufacture of claim 11, wherein the operations further  
2 comprise:  
3           assigning a storage slot count greater than a total number of storage slots in a  
4 library to one or more logical libraries;  
5           adding new storage slots to the library; and

6           allowing one or more of the logical libraries to be associated with the newly added  
7 storage slots.

1           18.    The article of manufacture of claim 17, wherein the storage slot count  
2 equals a maximum number of storage slots that may subsequently be in the library.

1           19.    The article of manufacture of claim 17, wherein the operations further  
2 comprise:  
3           adding a new frame to the library that includes the new storage slots.

1           20.    The article of manufacture of claim 17, wherein the new storage slots  
2 comprise storage slots whose status is changed from a status of not being eligible to be  
3 associated with one or more of the logical libraries to being eligible to be associated with  
4 one or more of the logical libraries.

1           21.    A library, comprising:  
2           means for receiving a move command to move a portable data storage medium  
3 from a source address to a destination address;  
4           means for locating an empty storage slot that has no association with the  
5 destination address;  
6           means for moving the portable data storage medium from the source address to the  
7 located empty storage slot; and  
8           means for storing an association between the located empty storage slot and the  
9 destination address.

1           22.    The library of claim 21, wherein means for locating comprises means for  
2 locating a closest empty storage slot.

1        23.    The library of claim 21, wherein storing the association further comprises:  
2        means for updating one or more tables.

1        24.    The library of claim 21, further comprising:  
2        means for assigning a storage element count to each one of multiple logical  
3        libraries, wherein the sum of the storage element count for each one of the multiple logical  
4        libraries exceeds the total number of storage slots in the library.

1        25.    The library of claim 24, wherein the storage element count for one or more  
2        of the multiple logical libraries is equal to a total number of storage slots in a library.

1        26.    The library of claim 24, further comprising:  
2        means for allowing one or more of the multiple logical libraries to be associated  
3        with any storage slot in a library.

1        27.    The library of claim 21, further comprising:  
2        means for assigning a storage slot count greater than a total number of storage  
3        slots in a library to one or more logical libraries;  
4        means for adding new storage slots to the library; and  
5        means for allowing one or more of the logical libraries to be associated with the  
6        newly added storage slots.

1        28.    The library of claim 27, wherein the storage slot count equals a maximum  
2        number of storage slots that may subsequently be in the library.

1        29.    The library of claim 27, further comprising:  
2        means for adding a new frame to the library that includes the new storage slots.

- 1           30.    The library of claim 27, wherein the new storage slots comprise storage
- 2 slots whose status is changed from a status of not being eligible to be associated with one
- 3 or more of the logical libraries to being eligible to be associated with one or more of the
- 4 logical libraries.